Amendments to the Specification:

Please replace the paragraph beginning at page 9, lines 7-8 with the following rewritten paragraph:

~~Figure 1 is a schematic block diagram~~ <u>Figures 1A and 1B are schematic block diagrams</u> of a broadband communications network incorporating the present invention;

Please replace the paragraph beginning at page 9, lines 12-14 with the following rewritten paragraph:

Figure 2 is a schematic block diagram of a portion of the broadband communications network shown in ~~Figure 1~~ <u>Figures 1A and 1B</u> that provides a satellite-based real-time HTML multicast system according to the present invention;

Please replace the paragraph beginning at page 10, lines 2-7 with the following rewritten paragraph:

~~Figure 1 shows a schematic block diagram~~ <u>Figures 1A and 1B show schematic block diagrams of</u> broadband communications network 100 in which the present invention can be utilized. Broadband communications network 100 includes a plurality of Web servers 101, 102 and 103 that are coupled together via a telecommunications or computer network 104, such as the Internet (Web). Web servers 101, 102 and 103 operate in a well-known manner as host devices that store information, such as Web or data pages.

Please replace the paragraph beginning at page 10, lines 8-17 with the following rewritten paragraph:

Telecommunications network 104, when embodied as the Internet, can include a plurality of routers 105-113, a plurality of cache engines 114 and 115, and one or more Very Small Aperture Terminal (VSAT) hubs 116. Routers 105-113 can be clustered in a plurality of sub-networks 117 and 118 that are interconnected via an Internet Backbone 119. Sub-networks that are connected directly to Internet backbone 119 are commonly referred to as Tier 1 point-of-presence (POP) networks. While only servers 101-103, routers 105-113, cache engines 114 and 115, VSAT hub 116 and subnetworks 117 and 118 are shown in ~~Figure 1~~ Figures 1A and 1B as part of communications network 100, it should be understood that more or fewer of each component can be part of communications network 100.

Please replace the paragraph beginning at page 11, lines 1-5 with the following rewritten paragraph:

one or more VSAT hubs 128. VSAT hub 128 can include an integral cache 129 and/or cache engine 130 containing a cache. While only remote stations 121 and 122, satellites 126 and 127, and VSAT hub 128 are shown in ~~Figure 1~~ Figures 1A and 1B as part of communications network 100, it should be understood that more or fewer of each component can be part of communications network 100.

Please replace the paragraph beginning at page 14, lines 9-22 with the following rewritten paragraph:

When a local cache in a remote station 120 does not include a requested page and the objects associated with the requested page, normally a request is then made to Internet 104 for

retrieving the necessary data. A request for a domain name server (DNS) look-up can be made from a remote station 120 to VSAT hub 128. According to the invention, VSAT hub 128 can optionally store a version of the DNS tables in cache engine 129 to immediately return the IP address for the desired web server to the requesting remote station 120. When a locally stored DNS table is available at VSAT hub 128, an immediate look-up is executed. When a DNS table is located remotely from VSAT hub 128, VSAT hub 128 requests the IP address of the desired Web server from the remotely located DNS (not shown in ~~Figure 1~~ Figures 1A and 1B) in a well-known manner. In either event, VSAT hub 128 initiates the request for the desired web page directly to the retrieved IP address for obtaining and returning the base page to the requesting remote station. Thus, the delay of transmitting the IP address across the satellite from the remote station and receiving the request back is substantially reduced.

Please replace the paragraph beginning at page 17, lines 10-23 with the following rewritten paragraph:

Yet another aspect of the invention utilizes tunneling between various locations within communications network 100 to further reduce latency associated with multiple open connections. Tunneling allows a process running at a remote station 120 to communicate directly with a process located remotely from remote station 120, such as to a process on the other side of a satellite link. For example, as shown in ~~Figure 1~~ Figures 1A and 1B, a tunnel 131 can be formed between a remote station 120 and a VSAT hub 128. Similarly, a tunnel 132 can be formed between a remote station 120 and one or more web servers, such as server 102,

located anywhere within telecommunications network (Internet) 104. Further, a tunnel 133 can

be formed between a remote station 120 and/or one or more servers, such as server 103, within a

selected sub-network, such as sub-network 118, that form a point of presence (POP) with

telecommunications network (Internet) 104. Tunnel 133 provides the advantage of avoiding

latency associated with the most congested part of the Internet, such as the Internet backbone 43.

Tunneling also allows encrypting in a well-known manner for transferring sensitive data over the

entire path of the tunnel.

Please replace the paragraph beginning at page 20, lines 14-23 with the following

rewritten paragraph:

Figure 2 is a schematic block diagram of a portion of broadband communications

network 100 (Figure 1 (Figures 1A and 1B) that provides a satellite-based real-time HTML

multicast system 200 according to the present invention. For simplicity, Figure 2 shows only the

functional blocks of the multicast transmission system of the present invention. System 200

includes a hub or server node 201 and a plurality of client nodes 202, although only a single

client node 202 is shown in Figure 2. Hub node 201 is connected to telecommunications

network 104 (Figure 1) (Figures 1A and 1B), such as the Internet (WWW). Alternatively,

telecommunications network 104 can also be a local area network (LAN) or a wide area network

(WAN) that, in turn, is connected to the Internet. Telecommunications network 104 includes

information that is preferably stored in the form of hypertext mark-up

Please replace the paragraph beginning at page 21, lines 16-21 with the following rewritten paragraph:

Hub node 201 includes a Server Content Evaluator and Cache 205 (i.e., cache 114 in ~~Figure 1~~ Figures 1A and 1B), and a Multicast Engine 206. Server Content Evaluator and Cache 205 is connected to telecommunications network 104 to operatively receive and send communications messages from/to telecommunications network 104 in a well-known manner. Server Multicast Engine 206 is connected to Server Content Evaluator and Cache 205.

Please replace the paragraph beginning at page 21, lines 22-23 with the following rewritten paragraph:

Client node 202 includes a Client Multicast Engine 207, a Client Content Cache 208 (i.e., cache 124 in ~~Figure 1~~ Figures 1A and 1B) and a Client Content Synchronizer 209. Client Multicast

Please replace the paragraph beginning at page 22, lines 1-7 with the following rewritten paragraph:

Engine 207 is communicatively coupled in a well-known manner to Server Multicast Engine 206 through satellite 231. Additionally, Client Multicast Engine 207 is coupled to Client Content Cache 208. Client Content Synchronizer 209 is communicatively coupled in a well-known manner to Server Content Evaluator and Cache 205 through satellite 231. Client Content Synchronizer 209 is also coupled to Client Content Cache 208, and to at least one client application that is executing at, for example, a remote station 120 ~~(Figure 1)~~ (Figures 1A and

1B).

Please replace the paragraph beginning at page 25, lines 7-19 with the following rewritten

paragraph:

Figure 3 is a schematic block diagram of a portion of broadband communications

network 100 (Figure 1) (Figures 1A and 1B) that provides a page accelerating system 300

according to the present invention. For simplicity, Figure 3 shows only the functional blocks of

the page accelerating system of the present invention. Page accelerator system 300 includes a

hub or server node portion 301 and at least one client node portion 302. Hub node portion 301 is

connected to telecommunications network 104 (Figure 1) (Figures 1A and 1B), again, such as the

Internet (WWW). Alternatively, telecommunications network 104 can also be a local area

network (LAN) or a wide area network (WAN) that, in turn, is connected to the Internet. Once

again, telecommunications network 104 includes information that is preferably stored in the form

of hypertext mark-up language (HTML) pages. Hub node portion 301 is communicatively

coupled to each client node portion 302 over a satellite communication link utilizing a satellite

313 of a satellite network in a well-known manner.

Please replace the paragraph beginning at page 26, lines 17-23 with the following

rewritten paragraph:

According to one exemplary embodiment of the present invention, a client hub portion

302 includes a personal computer 306 (also referred to herein as a Remote Web Browser

(RWB)), a Remote Tunnel Agent (RTA) 307 (also referred to herein as a Remote Page

Acceleration Sub-system (RPAS)), a VSAT 308 and a remote satellite dish antenna 309. This

exemplary embodiment corresponds to PC 122 and remote VSAT station 123 shown in ~~Figure 1~~

Figures 1A and 1B. According to another exemplary embodiment of the present invention, a

client hub portion 302 includes a PC-VSAT-RTA 310 having an

Please replace the paragraph beginning at page 27, lines 1-2 with the following rewritten

paragraph:

integrated RTA and an RWB, and a remote satellite dish antenna 311. This second

exemplary embodiment corresponds to PC-VSAT 121 shown in ~~Figure 1~~ Figures 1A and 1B.